



INSURABLE LOSSES OF WHEAT IN SELECTED COUNTIES OF
DELAWARE, MARYLAND, NORTH CAROLINA, AND VIRGINIA

1930 - 1935

Crop insurance for wheat is provided in the Farm Act of 1938 to become available to farmers for the crop to be harvested in 1939. In order to determine its adaptation to the area where conditions similar to those in the States of Delaware, Maryland, North Carolina, and Virginia exist, a study of insurable losses in a county in each of these States was made to determine:

1. What insurable losses, if any, had occurred.
2. The part of such losses that would have been recoverable had the present plan of insurance been in effect.

The analysis was made by use of the data submitted for applications under the Agricultural Adjustment Administration Wheat Program by wheat farmers in Kent County, Delaware, Frederick County, Maryland, Rowan County, North Carolina, and Rockingham County, Virginia. The records used were for the six-year period 1930-1935, inclusive, which is also the period used in connection with the establishment of premiums for the insurance program.

The counties selected represent typical areas of each State. The analysis is intended to assist farmers and State and County offices in discussion of the insurance program.

The figures are based on a 75% insurance coverage, that is, 75% of the average yield would be insured by the policy and losses of yield below that point would be recoverable from insurance. A coverage of 50% of the average yield is also provided under the insurance program.

TABLE I

NUMBER OF FARMS HAVING INSURABLE LOSSES,
BY YEARS--BASIS 75% INSURANCE

County	1930	1931	1932	1933	1934	1935	Loss Years	No. of Farms Sur- veyed	6-Year Total Loss in Bushels	Average loss per acre 1930-35
Frederick, Md.	33	52	806	308	85	28	1312	1283	3710.5	2.9
Kent, Del.	1	8	211	118	23	38	399	381	849.	2.2
Rockingham, Va.	34	5	94	185	54	102	474	597	966.0	1.6
Rowan, N. C.	8	5	22	18	9	13	75	109	129.8	1.2

The number of farmers having losses that would have been covered by insurance, had it been in effect, during the six-year period 1930-1935. Some farmers in each county had losses in each year. The greatest losses were during the drought years.

TABLE II

FREQUENCY OF LOSSES 1930 - 1935
BASIS 75% INSURANCE

Number of farms having insurable losses in none, one, two, three, and four years, respectively, for the six-year period.

County	None	1 Year	2 Years	3 Years	4 Years	Total No. Farms
Frederick, Md.	287	702	274	19	1	1283
Kent, Del.	96	176	104	5	0	381
Rockingham, Va.	222	285	81	9	0	597
Rowan, N. C.	57	31	19	2	0	109

While a large number of farms did not have losses during the period that would have been recoverable from insurance, a great many would have recovered losses in one year and a smaller number would have recovered losses in two or more years.

TABLE III

NUMBER OF FARMS AND AMOUNT OF INSURABLE LOSS IN BUSHEL
1930 -- 1935

County	Insurable Loss in Bushels									Total Number Farms
	0	.1-1.0	1.1-2	2.1-3	3.1-4	4.1-5	5.1-10	10.1-15	Over 15	
	Number of Farms									
Frederick, Md.	287	168	143	139	127	140	247	30	2	1283
Kent, Del.	96	54	51	57	43	34	45	1	0	381
Rockingham, Va.	222	100	99	60	46	31	30	8	1	597
Rowan, N. C.	57	15	10	14	3	3	7	0	0	109

The amount of recoverable loss varies greatly from those who would have recovered nothing to those few who would have recovered more than 15 bushels per acre in the 6 years. Although the average loss for the county is small as seen in Table I a number of farmers had losses substantially greater than the average.

TABLE IV

RELATIONSHIP OF YIELD PER ACRE AND INSURABLE LOSS

County	County Average Yield	Percentage of farms having insurable losses in one or more years with average yields of								All Farms
		0- 10	10.1- 12.5	12.6- 15.0	15.1- 17.5	17.6- 20.0	20.1- 22.5	22.6- 25.0	25.10 Over	
Frederick, Md.	18.6	85.7	80.0	84.7	83.7	78.0	74.3	67.4	67.8	77.7
Kent, Del.	16.9	85.7	75.0	75.7	74.5	70.1	82.8	75.0	66.7	74.8
Rockingham, Va.	18.1	-	81.0	67.7	70.2	66.0	60.5	44.3	46.7	62.8
Rowan, N. C.	12.1	90.0	54.5	50.0	47.6	30.4	46.7	33.3	25.0	47.7

Although there was a tendency toward greater frequency of losses on farms with high average yields, losses occurred in all yield groups.

TABLE

Showing the results of the experiments conducted at the University of California, Berkeley, during the year 1901.

Experiment 1. - The effect of temperature on the rate of reaction between hydrogen peroxide and potassium iodide.										
Temp. (°C.)	Time (sec.)	Volume of O ₂ (cc.)	Rate (cc./min.)	Temp. (°C.)	Time (sec.)	Volume of O ₂ (cc.)	Rate (cc./min.)	Temp. (°C.)	Time (sec.)	
10	120	1.5	0.0125	20	60	3.0	0.0500	30	30	4.5
20	60	3.0	0.0500	30	30	4.5	0.0750	40	20	6.0
30	30	4.5	0.0750	40	20	6.0	0.0750	50	15	7.5
40	20	6.0	0.0750	50	15	7.5	0.0750	60	12	9.0
50	15	7.5	0.0750	60	12	9.0	0.0750	70	10	10.5

Notes: - The experiments were conducted in a water bath maintained at the temperature indicated. The volume of oxygen gas evolved was measured by the displacement of water in a graduated cylinder inverted over a trough of water. The time required for the evolution of a given volume of gas was determined by a stop watch.